

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claims 1-20 (Canceled).

Claim 21 (Previously Presented): An article comprising a layer and a substrate, wherein the layer is obtained by thermal treatment of an aqueous dispersion that has been applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 90 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5.

Claim 22 (Previously Presented): The article as claimed in claim 21, wherein the thickness of the layer ranges from 100 nm to 1 mm.

Claim 23 (Previously Presented): The article as claimed in claim 21, wherein the thickness of the layer ranges from 1 μm to 50 μm.

Claim 24 (Previously Presented): The article as claimed in claim 21, wherein the thickness of the layer ranges from 5 μm to 15 μm.

Claim 25 (Canceled):

Claim 26 (Previously Presented): The article as claimed in claim 21, wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least  $170 \text{ m}^2/\text{g}$  and at least one powder having a BET surface area of at most  $70 \text{ m}^2/\text{g}$ , wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5.

Claim 27 (Previously Presented): The article as claimed in claim 21, wherein the titanium dioxide content of the powder ranges from 0.1 to 99.9 wt.%.

Claim 28 (Previously Presented): The article as claimed in claim 21, wherein the titanium dioxide content of the powder ranges from 2 to 20 wt.%.

Claim 29 (Previously Presented): The article as claimed in claim 21, wherein the substrate is selected from the group consisting of borosilicate glass, silica glass, glass ceramic, and a material with a very low coefficient of expansion.

Claim 30 (Previously Presented): The article as claimed in claim 21, further comprising less than 0.5 wt.% of impurities.

Claim 31 (Previously Presented): A process for preparing an article as claimed in claim 21, comprising applying a dispersion containing a silicon/titanium mixed oxide powder to a substrate, and thermal treatment sintering the dispersion applied to the substrate to form a layer.

Claim 32 (Previously Presented): The process as claimed in claim 31, further comprising preparing the dispersion by flame hydrolyzing a silicon/titanium mixed oxide powder, wherein the proportion of powder ranges from 0.1 to 60 wt.% in the dispersion.

Claim 33 (Previously Presented): A method comprising coating a material comprising forming a layer by thermal treating an aqueous dispersion that has been applied to said material, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least  $130 \text{ m}^2/\text{g}$  and at least one powder having a BET surface area of at most  $90 \text{ m}^2/\text{g}$ , wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5 and wherein said material is selected from the group consisting of an ultra-low expansion material a photocatalytic material, a self-cleaning mirror, a superhydrophilic constituent, a lens, a container for a gas and a container for a liquid.

Claim 34 (Previously Presented): The article as claimed in claim 26, wherein the titanium dioxide content of the powder ranges from 2 to 20 wt.%.